

REMARKS

Reconsideration and allowance of this application, as amended, is respectfully requested.

This Amendment is in response to the Final Office Action dated February 15, 2007. By the present Amendment, claim 8 has been amended to correct the misspelling noted in paragraph 1A on page 2 of the Office Action. Therefore, entry of this Amendment, in accordance with the provisions of 37 CFR §1.116, is respectfully requested.

Reconsideration and allowance of claims 8-25 and 27-38 over the cited prior art listed in paragraphs 3-5 of the Office Action is also respectfully requested. In each case, these rejections are premised on the combination of Lenz '751 (USP 5,534,751) and Lenz '356 (USP 5,569,356), together with other cited prior art. Applicants respectfully submit that the respective teachings of the Lenz '751 and Lenz '356 patents would not lead one of ordinary skill in the art to consider a combination of these references, and, as such, would not lead to the claimed invention. Accordingly, consideration of the following comments is respectfully requested.

In the Office Action, it is recognized that the discharge confining means of the Lenz '751 patent is not made out of SiC. However, Lenz '356 is cited as teaching a discharge confining means 34 that is made of SiC. As such, the Office Action goes on to state:

"The motivation of making the discharge confining means out of SiC is to provide an alternative material construction that would limit the contamination caused by the interaction of plasma. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention for the discharge confining means of Lenz et al '751 to be made of SiC as taught by Lenz et al '356 since it is an alternative material of construction

that would limit the contamination caused by the interaction of plasma.”

In response, applicants respectfully submit that inasmuch as the Lenz ‘356 patent was filed on May 19, 1995, before the July 10, 1995 filing date of the application leading to the ‘751 patent, clearly if Lenz had any intention whatsoever of utilizing SiC as a discharge ring material in the ‘751 patent, this would have been disclosed as an alternative. Obviously, Lenz, as a coinventor of both patents (and apparently the lead inventor of both patents), was well aware of the use of SiC for discharge confining rings by virtue of the fact that he utilized it in the ‘356 patent. However, notwithstanding his awareness of this possibility, in the Lenz ‘751 patent, the only materials mentioned for the discharge confining rings are dielectric materials such as silica or quartz. It is respectfully submitted that this silence on the part of the lead inventor Lenz in the ‘751 patent, notwithstanding his clear recognition of the possibility of SiC, represents a direct teaching away from using SiC as the material in the ‘751 patent.

In further regard to this matter, it is noted that, from the very outset, Lenz ‘751 emphasizes the use of dielectric material, rather than semiconductor material (such as SiC) by stating in the opening sentence of the Abstract that the invention is directed to:

“Plasma etching apparatus includes a stack of quartz rings that are spaced apart to form slots therebetween and that are positioned to surround an interaction space between two electrodes of the apparatus where a plasma is formed during the operation of the apparatus.”

Following this, reference is again made to the use of either a single or multiple dielectric rings for the discharge confinement (e.g., see column 2, lines 14-21).

Then, in the body of the Specification, it is clearly stated:


“The ring assembly 30, which serves as a slotted confinement shield, comprises a stack of circular rings 32, each of a dielectric that preferably is high quality fused silica or quartz.”

It is urged that the fact that Lenz only refers to the use of dielectrics for the discharge confinement rings, notwithstanding his obvious knowledge of the possibility of using a semiconductor material such as SiC, represents a clear instruction that Lenz only regarded dielectric material as being appropriate for a structure such as used in the '751 patent. Otherwise, it is respectfully submitted that the use of an alternative semiconductor material would have been mentioned by Lenz '751. The clear inference of the fact that such an alternative material is not mentioned, notwithstanding the fact that Lenz had filed a patent application less than two months earlier using SiC, is that Lenz only regarded dielectric material as being suitable for the structure taught by the '751 patent. Therefore, it is urged that the statements made in the Office Action that one of ordinary skill in the art would consider using SiC as the material for the dielectric rings in the '751 patent goes directly against the fact that Lenz himself chose not to mention SiC or any other semiconductor material for that matter, as an alternative when obviously he had technical knowledge of such a possibility. Therefore, reconsideration and removal of the rejections of claims 8-25 and 27-38 based upon this combination of the two Lenz' patents is earnestly solicited, together with allowance of these claims.

If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 520.35237CV4), and please credit any excess fees to such deposit account.

Respectfully submitted,
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